

confess that no insects were observed to alight on the plant; but this may be owing in some measure to the early season of the year at which the plant blooms in this country, or to its having been taken from the green-house into a drawing-room, where the windows were generally closed; or, what is still more probable, that British insects are not the same as Australian, and have not the same habits; for it seems almost evident that it would require an insect of some considerable size and of some peculiar structure and habits to remove and apply the pollen, the secretion not being in the blossom itself, but at a short distance from it, on the phylloidium.

However, none of the flowers were fertilized; but it was remarked that the styles became elongated to nearly double the length of the stamens, particularly towards the time of the fading and falling of the blossoms. The thought readily arises, Is this another instance of dimorphism? and is there another plant, with short-styled stigmas, or with some other peculiar structure, adapted and necessary for the perfect fertilization? This, future and further observation may verify; but it appears highly suggestive of a fine field of research to those who possess or have access to large collections of *Acaciæ*. The fact of some *Acaciæ* fruiting abundantly in greenhouses, and others rarely or never, has often attracted attention; and artificial fertilization would do much towards ascertaining whether it is to the absence of insect agency that the sterility of the plants is due.

An intelligent nurseryman here informs me that he has never observed the plant to form legumes, or, at all events, other than abortive ones. He says the plant was originally raised at Ghent, from seed from Australia, and that that place is the great mart where it is propagated by cuttings, and imported into this country.

The microscopist will find the stamens, and indeed every portion of the floral whorls, beautiful and interesting objects, as, from their extreme transparency, the cellular tissue and the spiral vessels are distinctly displayed, without any dissection or other preparation than being placed in a drop of water.

IV.—*On the Nomenclature of the Foraminifera.* By W. K. PARKER, F.R.S., T. RUPERT JONES, F.G.S., and H. B. BRADY, F.L.S., F.G.S.

[Plates I., II., III.]

Part X. (continued).—*The Species enumerated by D'Orbigny in the 'Annales des Sciences Naturelles,' vol. vii. 1826.*

III. *The Species illustrated by Models.*

PREVIOUSLY to the publication of his "Tableau Méthodique des

Céphalopodes" in the 'Annales des Sciences Naturelles,' vol. vii. 1826, D'Orbigny had prepared and published, in part at least, a hundred models of *Foraminifera* (at that time regarded as microscopic Cephalopods), illustrating many of the species for the first time. These models were made in plaster of Paris, were about an inch or more in length, and were issued in sets of twenty-five, arranged in suitable boxes, each box bearing a label as follows* :—"Models of microscopic Cephalopods, recent and fossil, representing one individual of each of the principal divisions of a new method based on the mode of growth of the shells. The Models are from forty to two hundred times the size of the originals, so as to show their characters distinctly. By M. Alcide Dessalines D'Orbigny, junior. There are Four Fasciculi, each comprising twenty-five Models; besides, for the first sixty subscribers, three or four shells. The great rarity of the originals does not allow any more to be promised. (The specimens are in glass boxes, which must be opened with great care.) The four Fasciculi will be issued in the course of the first six months of 1823: the price of each is twenty francs, payable either at Rochelle to the author (Jardin des Capucins), or at Paris to M. ———. Letters and money to be post-free. The First Fasciculus of the Models may be seen at Paris, at the Museum of Natural History of the Jardin du Roi, and at M. ———'s. The subscribers will receive with

* "Modèles de céphalopodes microscopiques, vivans et fossiles, représentant un individu seulement de chacune des principales divisions d'une nouvelle méthode, basée sur le mode d'accroissement des coquilles. Le diamètre de ces modèles a été porté de 40 jusqu'à 200 fois celui des coquilles originales, afin de rendre plus sensibles tous leurs caractères.

"Par M. Alcide Dessalines D'Orbigny, fils.

"La Souscription se composera de 4 Livraisons, qui comprendront chacune 25 Modèles, et en outre 3 à 4 coquilles pour les 60 premiers souscripteurs: l'extrême rareté des originaux ne permet pas maintenant d'en promettre davantage. (Ils sont ici renfermés dans les boîtes de verre, qu'on ne doit ouvrir qu'avec la plus grande précaution.)

"Les quatre Livraisons seront expédiées dans le cours des 6 premiers mois de l'année 1823; le prix de chacune d'elles est 20 francs, et sera payé, soit à la Rochelle, chez l'auteur (Jardin des Capucins), soit à Paris, chez M. ———, en affranchissant les lettres et l'argent.

"On peut voir la première Livraison de ces Modèles, à Paris, au Muséum d'Histoire Naturelle du Jardin du Roi, et chez M. ———. Les souscripteurs recevront, avec la quatrième Livraison, le tableau méthodique de la distribution de ces Céphalopodes, qui indiquera, par numéros correspondant à ceux des Modèles, le nom des individus envoyés et l'ordre de leur classification."

"4^{me} Livraison.

"Nota.—Les Modèles coloriés représentent les coquilles fossiles; et les blancs, les vivans. Le lieu et la forme des syphons y sont indiqués par des traces ou par des points noirs."

the Fourth Fasciculus the Systematic Table of the Distribution of these Cephalopods, indicating, by numbers corresponding to those of the Models, the names of the specimens sent, and the order of their classification."

With the Fourth Fasciculus the following note was issued:—

"The coloured Models represent the fossil shells; the white Models, the recent shells. The place and shape of the siphuncles are indicated by the marks or black spots."

In his Introduction to M. D'Orbigny's memoir in the same volume of the 'Annales des Sciences Naturelles,' p. 99, M. Fé-russac says that two of the Fasciculi of Models had been published, and that the other two would soon follow. The Models therefore were issued, partly, before November 7th, 1825, when the Memoir was presented to the Academy of Sciences; and though we do not know the exact date of the publication of the third and fourth sets, we shall here regard them as belonging to about the same period (1825–26).

M. D'Orbigny's researches on *Foraminifera* appear to have arisen from his father's attention having been directed to these Microzoa; for the elder D'Orbigny, who was a physician at Esnaudes, near Rochelle, wrote to M. Fleurian de Bellevue, in 1819, on his discovering, on the shores of the Atlantic, microscopic Cephalopods, among which he had seen "living Lenticulines, Rotalies, Discorbes, Spirolines, &c." (See Annales de Physique, vol. xxxviii. p. 187.) The younger D'Orbigny enlarged his knowledge of these little shells by the collection of numerous samples of sea-sand and of fossiliferous deposits from various parts of the world, working perseveringly and methodically for several years, reducing already published notices and his own observations to a system, which, though artificial throughout and otherwise defective, was very useful; he described the general characters and external features with care, illustrating his descriptions by the Models now under consideration and the elaborate plates of his noble quarto and folio volumes on the *Foraminifera*, and leaving in the end an extensive collection of material. His several works and their numerous illustrations, chiefly relating to the larger specimens which had come under his notice, are necessarily the groundwork for writers on *Foraminifera* up to the present time.

We will now proceed to the examination of the Models *seriatim*, in the order in which they were originally numbered by D'Orbigny. A series of carefully prepared outlines appended to this paper (Plates I., II., & III.) will assist in forming a correct appreciation of our remarks. In these plates the forms represented by the Models are grouped, as far as may be, according to their respective families:—the MILIOLIDA (*Vertebra-*

lina, Pl. I. figs. 1, 2; *Miliola*, figs. 3-15; *Fabularia*, fig. 16; *Peneroplis*, figs. 17-20; *Orbiculina*, figs. 21, 22; *Alveolina*, fig. 23); LITUOLIDA (*Valvulina*, figs. 24-26); LAGENIDA (*Nodosarina*, figs. 27-46; *Polymorphina*, Pl. II. figs. 47-53; *Uvigerina*, fig. 54); GLOBIGERINIDA (*Globigerina*, figs. 55, 56; *Pullenia*, fig. 57; *Spharoidina*, fig. 58; *Textularia*, figs. 59-63; *Bulimina*, figs. 64-66; *Cassidulina*, fig. 67; *Discorbina*, figs. 68-71; *Planorbulina*, figs. 73-77, and Pl. III. figs. 78, 79; *Pulvinulina*, Pl. III. figs. 80-82; *Rotalia*, figs. 83-86; *Calcarina*, figs. 87-90); NUMMULINIDA (*Amphistegina*, figs. 91, 92; *Operculina*, figs. 93, 94; *Nummulina*, fig. 95; *Polystomella*, fig. 96; *Nonionina*, figs. 97-99; *Heterostegina*, fig. 100).

LIVRAISON 1^{re}.

Model no. 1. *Nodosaria Radicula**, Linn. sp. *Annales des Sciences*†, vol. vii. 1826, p. 252, no. 3.

Hab. Adriatic. Pl. I. fig. 27.

The common straight Nodosarian form, with few globose chambers, smooth and free from any surface-markings.

Model no. 2. *Nodosaria (Orthocerina) Clavulus**, Lamk. sp. Page 255. no. 48.

Hab. Fossil near Paris. Pl. I. fig. 25.

A Clavuline variety of *Valvulina triangularis*. The term *Orthocerina* was applied by D'Orbigny in 1839 (*Foram. Cuba*, p. 18 of 8vo edition, p. 47 of 4to ed.) to a Foraminifer really related to *Nodosaria*, namely, *O. quadrilatera* (For. Cuba, pl. I. figs. 11, 12). An *Orthocerina* which was described and figured by Reuss as *Triplasia* (and afterwards *Rhabdogonium*) *Murchisoni* is perhaps the best type of this somewhat peculiar genus. Although *Orthocerina* is evidently one of the *Lagenidæ*, allied to both *Nodosaria* and *Uvigerina*, it must be allowed to stand apart. (See Carpenter's *Introd. Foram.* p. 166.)

Prof. Reuss, in describing the three-sided *Orthocerina* above alluded to, from fossil specimens found in the Cretaceous rocks of the Eastern Alps, made use of the generic term *Triplasia* for it (*Sitzungsber. Akad. Wiss. Wien*, vii. 1854), and subsequently substituted *Rhabdogonium* as a denomination for these three- or four-sided *Orthocerina* (*ibid.* 1860). D'Orbigny's subgeneric term is misapplied to the Model under consideration, yet it was evidently used in 1839 on the plan that he originally intended;

* The species and varieties marked by an asterisk have been already noticed by us in former papers.

† The references throughout are to D'Orbigny's paper in the '*Annales des Sciences Naturelles*,' ser. 1. vol. vii. 1826.

and in the Cuban figures we have examples of the type of the genus, though in a somewhat exceptional condition.

Model no. 3. *Fronidularia rhomboidalis*, D'Orb. Page 256, no. 1.

Hab. Adriatic. Pl. I. fig. 31.

A variety of *Fronidularia complanata*, DeFr. The lozenge-shaped form of *Fronidularia* in which the lateral wings of the later chambers reach back only about half the length of the shell.

Model no. 4. *Vaginulina tricarinata*, D'Orb. Page 258, no. 4.

Hab. Adriatic. Pl. I. fig. 34.

A three-sided *Nodosaria*, with somewhat oblique chambers, and having a keel along each of the three edges. A similarly modified form is found fossil at Baden, near Vienna, and is described and figured by Dr. Karrer as *Rhabdogonium pyramidale*, Kar., in his valuable paper on the distribution of the fossil Foraminifera of the Vienna Basin (Sitzungsber. Math.-nat. Class. K. Akad. Wiss. vol. xlv. 1861, p. 20, pl. 1. fig. 5.

We have met with *V. tricarinata* recent in Mediterranean sands, in which, however, it is very rare. It also occurs in a fossil condition, sparingly, in Tertiary clay from near Malaga, and in the Subapennine Tertiary shell-sands.

Model no. 5. *Nodosaria (Dentalina) obliqua*, D'Orb.

Page 254, no. 36.

Hab. Adriatic. Pl. I. fig. 32.

A Dentaline *Nodosaria*, with broad and oblique chambers, the aperture being terminal, somewhat towards the convex side of the slightly curved shell.

This is a common form, both recent and fossil, and is scarcely separable from *D. communis*, D'Orb.

Model no. 6. *Marginulina Raphanus**, Linn. sp. Page 258, no. 1, pl. 10. figs. 7, 8.

Hab. Adriatic; fossil at Castel-Arquato, Italy. Pl. I. fig. 35.

The Marginuline condition of *Nodosarina Raphanus*, and the best type of the group. The straight *N. Raphanus* is the *N. Rapa* of D'Orbigny.

Model no. 7. *Textularia pygmæa**, D'Orb. Page 263, no. 13.

Hab. Adriatic. Pl. II. fig. 59.

Another small variety of *Textularia agglutinans*, subsequently described, no. 15 (p. 263), and named *T. aciculata*, is identical with this, and must be included under the same name.

Model no. 8. *Quinqueloculina Lyra*, D'Orb. Page 303, no. 45.

Hab. Adriatic and Mediterranean. Pl. I. fig. 11.

A thin, narrowish *Miliola*, with subsigmoid, somewhat carinate chambers.

Model no. 9. *Bulimina elegans*, D'Orb. Page 270, no. 10.

Hab. Adriatic, near Rimini. Pl. II. fig. 64.

Bulimina Preslii, Reuss, figured in the 'Verst. Kreid. Böhm.' (1846), pl. 13. fig. 72, and in Haidinger's 'Naturwiss. Abhand.' vol. iv. (1850), Kreidemergels von Lemberg, pl. 3. fig. 10, is the best type of the genus *Bulimina*. *B. elegans* is a delicate variety, narrower and less robust in growth, as well as more imbricated in the disposition of the chambers.

Model no. 10. *Rotalia Menardii*, D'Orb. Page 273, no. 26.

Hab. Adriatic, near Rimini. Pl. III. fig. 81.

This must be placed in the genus *Pulvinulina*, being a good subspecies of *P. repanda*. It is found in deep water, and is seldom abundant, except in Tropical seas. One or two beautiful specimens have occurred to us on our own coast, in sand dredged from deep water off the Isle of Man.

Model no. 11. *Nonionina Limba*, D'Orb. Page 594, no. 14.

Hab. Adriatic, near Rimini. Pl. III. fig. 99.

A variety of the subtype *N. asterizans*, F. & M., from which it differs in the greater development of the stellate sutural limbation, and in possessing a narrow thick keel, instead of the rounded edge of the subtype. The same variety, but with stouter and somewhat encrusted shell, occurs fossil in the neighbourhood of Bordeaux.

Model no. 12. *Rotalia punctulata**, D'Orb. Page 273, no. 25.

Hab. Adriatic, near Rimini. Pl. III. fig. 82.

This is a *Pulvinulina*, and not a *Rotalia*; it is perhaps even a more fully developed form than the type, *P. repanda*, F. & M. We have found fine handsome specimens in dredgings from the coast of Norway.

Model no. 13. *Gyroidina orbicularis*, D'Orb. Page 278, no. 1.

Hab. Adriatic, near Rimini. Pl. III. fig. 85.

The thin-shelled, somewhat globular variety of *Rotalia Becarii*, inhabiting deepish water, usually much smaller than the common shallow-water form. It is a widely distributed variety, and has been found on our own coast, in the Irish Sea and off the Shetland Islands.

Model no. 14. *Robulina virgata*, D'Orb. Page 290, no. 17.

Hab. Adriatic, near Rimini. Pl. I. fig. 40.

An umbonate *Cristellaria*, with few chambers, and destitute of any keel. Thick square bands of shell-substance, covering the partition-walls of the chamber, radiate in straight lines from the central umbo to the margin.

Model no. 15. *Rotalia bisaculeata*, D'Orb. Page 273, no. 20.

Hab. From ballast-sand. Pl. III. fig. 89.

This is rather a subvariety of the Rotaline genus *Calcarina*, of which Model no. 34 may be taken as the type. It does not differ very greatly from Deshayes's *Calcarina rarispina* (Lyell's Manual, 5th edit. p. 228, fig. 236), but sufficiently, however, to render a separate trivial name convenient. Its peculiarity consists in possessing a keel, extended into double points at intervals round the margin.

Model no. 16. *Peneroplis planatus**, F. & M., sp.
Page 285, no. 1.

Hab. Mediterranean, New Holland (Rawack). Pl. I. fig. 17.

This is the well-known widely distributed type, for which, as we have before stated, Forskål's specific name *Peneroplis perustus* takes precedence (Ann. Nat. Hist. March 1865).

Model no. 17. *Globigerina bulloides*, D'Orb. (young).
Page 277, no. 1.

Hab. Adriatic, near Rimini. Pl. II. fig. 56.

This is the young shell. See note on the adult, Model 76.

Model no. 18. *Adelosina striata*, D'Orb. (young).
Page 304, no. 2.

Hab. Fossil at Castel-Arquato, Italy. Pl. I. fig. 14.

It has been satisfactorily demonstrated that the delicate *Miliolæ*, with retort-shaped chambers, grouped by D'Orbigny under the generic name *Adelosina*, are only young specimens of other well-known species. The Model now under consideration represents the very young condition of *Quinqueloculina Brongniartii*; and the Model 97, which is given as the adult of the same species, is only *Q. Brongniartii* somewhat further developed.

Model no. 19. *Cristellaria (Saracenaria) Italica**, Defr. (young).
Page 293, no. 26.

Hab. Adriatic, near Rimini; and fossil near Sienna. Pl. I. fig. 42.

The young condition of the shell. See note on the adult, Model no. 85.

Model no. 20. *Orbiculina numismalis**, Lamk. Page 305, no. 1.

Hab. The Antilles and the Marianne Isles. Pl. I. fig. 21.

Though he adopts this form as the type of the genus *Orbiculina*, D'Orbigny rightly associates the three forms catalogued by Lamarck as *O. uncinata* (adult), *O. numismalis* (middle-aged), and *O. angulata* (young) as the same species in different stages of growth. *O. orbiculus*, F. & M., termed *O. nummata* by Lamarck, should also be included amongst the middle-aged forms. Subsequently D'Orbigny took the adult form, with the well-known name "*adunca*," originally conferred on it by Fichtel and Moll, as the central type; and we find this figured in the "Cuba" Monograph, pl. 8. figs. 8-16. On the same plate (figs. 4-7) we find another adult form of *Orbiculina*, thin, flat, and orbicular, with the name of *O. compressa*.

Model no. 21. *Dendritina Arbuscula**, D'Orb. Page 285, no. 1, pl. 15. figs. 6, 7.

Hab. Fossil near Bordeaux. Pl. I. fig. 20.

The thick robust variety of *Peneroplis pertusus*, with a single large aperture running into irregular dendritic ramifications. Found recent in tropical seas.

Model no. 22. *Articulina nitida**, D'Orb. Page 300, no. 1.

Hab. Fossil near Paris. Pl. I. fig. 2.

An elongated subcylindrical variety of *Vertebralina striata*, previously figured and described by Batsch as *Nautilus conico-articulatus*. It is an exceedingly variable form, and may be found in every gradation, from the narrow subcylindrical condition represented in the Model to the broad *Renulites opercularia* of Lamarck. The specimens taken from the abyssal depths of the Mediterranean and the deeper portions of the Red Sea are characteristically small. In the Eocene marl of Baljik, in Bulgaria, small and still more elongated specimens occur.

Model no. 23. *Polymorphina Thouini*, D'Orb. Page 265, no. 8.

Hab. Fossil near Paris. Pl. II. fig. 49.

A long narrow variety of *P. lactea*, W. & J.

Model no. 24. *Spirolina cylindracea**, Lamk. Page 286, no. 1.

Hab. Fossil near Paris. Pl. I. fig. 19.

The crozier-like, deep-water form of *Peneroplis pertusus*, common in the Grignon Tertiaries, and found recent in the deeper seas of tropical climates. Notwithstanding the identity with *Peneroplis*, the distinctive name *Spirolina* is convenient, if not necessary, in separating the long subcylindrical varieties from the outspread forms found in shallow water.

Model no. 25. *Valvulina triangularis**, D'Orb.
Page 270, no. 1.

Hab. Fossil near Paris. Pl. I. fig. 24.

This is the arenaceous, triserial, three-sided shell which may be looked upon as the type of a very variable group. The two Clavuline varieties which are represented by Models nos. 2 and 66 show the wide range, on one side; and Prof. Williamson's *Rotalina fusca* (*Valvulina Austriaca*), Monograph, pl. 5. figs. 114, 115, exhibits the opposite extreme in contour.

LIVRAISON 2^{me},

Model no. 26. *Lingulina carinata*, D'Orb. Page 257, no. 1.

Hab. Antilles; and fossil near Sienna. Pl. I. fig. 28.

The compressed, sharp-edged, straight subtype of *Nodosarina*, common as a fossil in the Lias and in many Tertiary clays, but rare in a recent condition. In D'Orbigny's "Cuba" it is mentioned as occurring in the West-Indian seas and in the neighbourhood of the Canaries. It is figured in Williamson's Monograph (pl. 2. figs. 33, 34), and noted as having been found recent in three British localities. Dr. Carpenter has it very large from Japan.

Model no. 27. *Planularia Cymba**, D'Orb. Page 260, no. 4,
pl. 10. fig. 9.

Hab. Adriatic. Pl. I. fig. 38.

This has been already noticed by us amongst the forms illustrated by figures in D'Orbigny's Memoir.

Model no. 28. *Textularia gibbosa**, D'Orb. Page 262, no. 6.

Hab. Mediterranean; and fossil at Castel-Arquato, Italy. Pl. II. fig. 60.

This is one of the largest forms of *Textularia*, with ventricose segments, and is found widely distributed. In common with the other bold varieties, it is at home and most luxuriant in water from 50 to 100 fathoms.

Model no. 29. *Polymorphina Burdigalensis*, D'Orb.
Page 265, no. 2.

Hab. Fossil near Bordeaux. Pl. II. fig. 48.

A somewhat unsymmetrical *Polymorphina*, having one side flattened, and consequently an excentric aperture. The chambers are numerous, and are compactly put together, the edges overlapping and giving a general even outline to the shell.

Model no. 30. *Polymorphina (Pyrulina) Gutta**, D'Orb.
Page 267, no. 28, pl. 12. figs. 5, 6.

Hab. Fossil, Castel-Arquato. Pl. II. fig. 51. "

Noticed in our previous paper on the species figured by D'Orbigny.

Model no. 31. *Biloculina aculeata*, D'Orb. Page 298, no. 3.

Hab. Fossil in the rocks of Pauliac (Gironde). Pl. I. fig. 5.

This seems to be an unusual and somewhat monstrous *Biloculina*, with a number of somewhat pointed prominences, arranged in two rows on opposite sides of the outer chamber. It may be regarded as a subvariety of *B. ringens*, which it closely resembles in general contour.

Model no. 32. *Quinqueloculina Ferussacii*, D'Orb.
Page 301, no. 18.

Hab. Fossil near Paris. Pl. I. fig. 12.

A narrow, elongated, somewhat angular *Quinqueloculina*, having a few stout costæ traversing the chambers from end to end. Williamson's *Miliolina bicornis* var. *angulata* (Monogr. pl. 7. fig. 196) may be assigned to this species.

Model no. 33. *Quinqueloculina Saxorum**, Lamk.
Page 301, no. 1.

Hab. Fossil near Paris. Pl. I. fig. 13.

This is a well-known form, not uncommon in a recent condition on the coral-reefs of tropical seas, and very abundant in the Calcaire grossier near Paris.

Model no. 34. *Calcarina Calcar**, D'Orb. Page 276, no. 1.

Hab. Martinique, Isle of France, Madagascar. Pl. III. fig. 87.

This cannot be separated from *Calcarina Spengleri*, Linn. The list of localities might be much extended, as there are few tropical seas in which specimens do not abound.

Model no. 35. *Rotalia rosea*, D'Orb. Page 272, no. 7.

Hab. The Antilles, the Isle of Martinique, Point Carbet. Pl. III. fig. 79.

This belongs to *Planorbulina*, not to *Rotalia* (restricted), and is nearly allied to *Planorbulina Haidingerii*. Its pink colour is very characteristic; and its tolerably limited distribution gives it additional claims for distinctive appellation. Coloured figures are given in the "Cuba" Monograph, pl. 3. figs. 9, 11. Small specimens are not uncommon in West-Indian sponge-sand.

Model no. 36. *Gyroidina Soldani*, D'Orb. Page 278, no. 5.

Hab. Adriatic, near Rimini. Pl. III. fig. 86.

As we have before stated, there is no sufficient reason for the separation of either this or *G. orbicularis* from the genus *Rotalia*. It is a small deep-sea variety, somewhat bolder, and having a thicker shell than *G. orbicularis*.

Model no. 37. *Truncatulina tuberculata**, D'Orb.

Page 279, no. 1.

Hab. All the shores of European seas. Fossil near Bordeaux, Paris, and Castel-Arquato. Pl. II. fig. 77.

This is *Truncatulina lobatula*, W. & J., sp., which is the commonest variety of *Planorbulina farcta*, F. & M., sp.

Model no. 38. *Rosalina Parisiensis*, D'Orb. Page 271, no. 1.

Hab. Fossil near Paris. Pl. II. fig. 70.

This is a flat, outspread, thin-edged variety of *Discorbina trochidiformis*, Lamk., sp.; a good subspecies—the type being *D. Turbo*, D'Orb., sp. It is commonly somewhat concave on its under surface. *Discorbina ochracea* (*Rotalina ochracea*, Will. Rec. For. Gt. Brit. pl. 4. fig. 112, and pl. 5. fig. 113) is a feebler form, closely allied to the one under consideration.

Model no. 39. *Rotalia rosacea*, D'Orb. Page 273, no. 15.

Hab. Fossil, Bordeaux. Pl. II. fig. 71.

This is another useful subspecies of *Discorbina Turbo*, D'Orb., sp. It is identical with D'Orbigny's *Asterigerina Planorbis* and Williamson's *Rotalina Mamilla*.

Model no. 40. *Amphistegina vulgaris*, D'Orb. Page 305, no. 8.

Hab. Fossil on the borders of the Lagoon of Tau, and near Bordeaux. Pl. III. fig. 91.

The type of the genus.

Model no. 41. *Cassidulina lævigata*, D'Orb. Page 281, no. 1,
pl. 15. figs. 4, 5.

Hab. From ballast-sand. Pl. II. fig. 67.

One of the species figured by D'Orbigny in the plates illustrating his memoir, and, as such, noticed in our previous paper.

Model no. 42. *Anomalina elegans*, D'Orb. Page 282, no. 4.

Hab. Fossil near Bordeaux. Pl. II. fig. 73.

The generic term *Anomalina* should properly be confined to the bold and more or less biconcave forms of the Planorbuline type. This Model illustrates *Discorbina*,—a good intermediate subspecies, passing insensibly into *D. vesicularis*. The same

form is figured by D'Orbigny, in the 'For. Foss. Vien.' pl. 10. figs. 13-15, under the name of *Rotalia complanata*.

Model no. 43. *Nonionina sphaeroides*, D'Orb. Page 293, no. 1.

Hab. From ballast-sand. Pl. II. fig. 57.

This is *Pullenia sphaeroides*, and bears no relation to the Nonionine subtype. See Carpenter's 'Introduction,' p. 184. It is figured in D'Orbigny's 'For. Foss. Vien.' pl. 5. figs. 8-10 as *Nonionina bulloides*. It is a small deep-water form, found both recent and fossil.

Model no. 44. *Cristellaria Cassis**, F. & M. Page 290, no. 3.

Hab. Adriatic, near Rimini; and fossil at Sienna. Pl. I. fig. 45.

The young shell. The adult is represented in Model no. 83.

Model no. 45. *Polystomella crista**, Linn. Page 283, no. 1.

Hab. The Atlantic, the Mediterranean, and the Adriatic. Pl. III. fig. 96.

Model no. 46. *Nonionina levis*, D'Orb. Page 294, no. 11.

Hab. Fossil near Paris. Pl. III. fig. 97.

This is *Nautilus incrassatus*, F. & M. (*Nonionina incrassata*: see Ann. Nat. Hist. ser. 3. vol. v. p. 101).

Model no. 47. *Cristellaria levigata*, D'Orb. Page 292, no. 19.

Hab. Fossil near Caen (Jurassic). Plate I. fig. 43.

A not uncommon form of *Cristellaria*, in which the early chambers are rotulate, and the later chambers strive to take a rectilinear arrangement. D'Orbigny refers, on the same page, to other *Cristellariae* from the Limestone of Caen, namely *C. lamellosa*, *C. Cadonensis*, *C. Lituus*; and at p. 259 he refers to *Planularia elongata*, *P. depressa*, and *P. striata* from the same limestone.

Model no. 48. *Peneroplis planatus*, F. & M. Page 285, no. 1.

Hab. Mediterranean, New Holland. Pl. I. fig. 18.

This is the narrow variety, *P. arietinus*, Batsch.

Model no. 49. *Planulina Ariminensis**, D'Orb.

Page 280, no. 1, pl. 5. figs. 1-3 bis.

Hab. Adriatic, near Rimini. Plate III. fig. 78.

A flat, thin *Planorbulina*, with raised chamber-walls.

Model no. 50. *Alveolina Boscii**, DeFrance. Page 306, no. 5.

Hab. Fossil near Paris. Pl. I. fig. 23.

The subtypical fusiform *Alveolina*, for which Montfort's trivial name, *A. sabulosa*, takes precedence.

LIVRAISON 3^{me}.

Model no. 51. *Nodosaria (Glandulina) Glans**, D'Orb.
Page 252, no. 2.

Hab. Adriatic; rare. Pl. I. fig. 30.

The finely striated variety of *G. levigata*, D'Orb. Batsch figures this, together with the primary elongated Nodosarian form, as *Nautilus comatus*. (Sechs Küpfertaf. pl. 1. figs. 2 a-d.)

Model no. 52. *Nodosaria (Mucronina) Hasta*, D'Orb.
Page 256, no. 49.

Hab. Adriatic. Pl. I. fig. 29.

A carinate, finely striated Nodosarian, of the straight type. Reuss refers to this Model as a *Fronicularia*—a judgment in which we cannot agree. Its straight septa and lateral keels indicate rather its Linguline affinity; besides which, it is more elongated in contour than is usual in *Fronicularia*. It is quite out of the question to draw a distinct line between these two subgenera; but in this case there is no room for doubt as to the nearest relationship.

Model no. 53. *Rimulina glabra*, D'Orb. Page 257, no. 1.

Hab. Adriatic. Pl. I. fig. 37.

An oblique, robust, somewhat compressed, few-chambered shell, with the aperture taking the form of a long slit down the edge of the large terminal chamber. Type, *Nodosarina Raphanus*.

Model no. 54. *Vaginulina elegans*, D'Orb. Page 257, no. 1.

Hab. Adriatic. Pl. I. fig. 33.

A beautiful limbate *Vaginulina*, with the septal lines thickened by exogenous deposit of clear shell-substance.

Model no. 55. *Marginulina glabra*, D'Orb. Page 259, no. 6.

Hab. Fossil near Sienna. Pl. I. fig. 36.

A common form, not coiled enough to be a *Cristellaria*, and not well enough nourished, one may say, to be enriched with thickened shell-matter and ribs such as we see in *Marginulina Raphanus*, the well-grown type.

Model no. 56. *Pavonia flabelliformis**, D'Orb. Page 260, no. 1,
pl. 10. figs. 10, 11.

Hab. Madagascar. Pl. I. fig. 22.

This is possibly a misprint for *Pavonina*. We have already noticed it in speaking of the species illustrated by figures in D'Orbigny's Memoir. It may be an *Orbiculina*.

Model no. 57. *Bigenerina Nodosaria**, D'Orb. Page 261, no. 1,
pl. 11. figs. 9-12.

Hab. Adriatic. Pl. II. fig. 62.

A subtypical form of *Textularia*, with a flat wide commencement, but taking on a cylindrical uniserial mode of growth in its later chambers. It is a common form in the Mediterranean and many other seas, and has been found as far north as Shetland.

Model no. 58. *Bigenerina (Gemmulina) digitata**, D'Orb.
Page 262, no. 4.

Hab. The Mediterranean. Pl. II. fig. 61.

Narrower in the growth of the early chambers than *B. Nodosaria*, having frequently a curved and compressed contour. This form and the preceding have usually the subarenaceous shell-structure of the larger *Textulariæ*.

Model no. 59. *Vulvulina Capreolus**, DeFr. Page 264, no. 1,
pl. 11. figs. 5-8.

Hab. Adriatic. Pl. II. fig. 63.

D'Orbigny refers this species to DeFrance; but we are unable to find any notice of it in DeFrance's works.

As we have before stated, this is *Grammostomum Pennatula*, Batsch, sp.

Model no. 60. *Dimorphina tuberosa*, D'Orb.
Page 264, no. 1.

Hab. Mediterranean. Pl. II. fig. 53.

Some very dissimilar forms have been grouped under the name of *Dimorphina*. As this is the first mention of the generic term, we propose to confine its application to the Dimorphine varieties of *Polymorphina*, of one of which Model no. 60 is a correct delineation. It is rare. We have specimens of it from the Crag of Suffolk. A somewhat similar, but really *Nodosarine*, form occurs not unfrequently in the Mediterranean area, both fossil and recent; off Syra (90 fathoms); and fossil, from Tertiary clays near Malaga.

Model no. 61. *Polymorphina (Guttulina) Problema*, D'Orb.
Page 266, no. 14.

Hab. Fossil, Castel-Arquato, Italy. Pl. II. fig. 50.

A many-chambered *Polymorphina*, somewhat irregular in the disposition of the segments, which are long and distinct, and do not overlap each other to the extent that is seen in most members of the genus.

Model no. 62. *Polymorphina* (*Guttulina*) *communis**, D'Orb.
Page 266, no. 15, pl. 12. figs. 1-4.

Hab. Adriatic; fossil near Bordeaux, Paris, Dax, and Castel-Arquato. Pl. II. fig. 47.

One of the forms alluded to in a previous paper as figured by D'Orbigny. It is the typical *Polymorphina lactea*, W. & J., sp.

Model no. 63. *Polymorphina* (*Globulina*) *gibba*, D'Orb.
Page 26, no. 20.

Hab. Atlantic (on the coast near Rochelle), Adriatic (near Rimini); fossil, near Paris, at Grignon, near Dax, near Bordeaux, at Chavagnes (Maine-et-Loire), and at Castel-Arquato. Pl. II. fig. 52.

The simplest and Globuline condition of *Polymorphina*; the chambers are few in number and embrace each other so as to leave no inequalities in the surface-contour,

Model no. 64. *Virgulina squamosa*, D'Orb. Page 267, no. 1.

Hab. Fossil near Sienna. Plate II. fig. 66.

One of the biserial forms of *Bulimina*, simulating *Textularia* in its mode of growth; much elongated, like the more delicate *Textulariæ*, but having the lengthened and twisted Bulimine aperture. *V. squamosa* is subordinate to *V. Schreibersii*.

Model no. 65. *Spheroidina bulloides*, D'Orb. Page 267, no. 1.

Hab. Adriatic, near Rimini, Isle of France; fossil near Sienna. Pl. II. fig. 58.

A good subtype, nearly related to *Globigerina*, but, in its clear and white shell, indistinct perforations, and general arrangement of chambers, bearing great similarity (or *isomorphism*) to the *Miliolæ*. Its home is in very deep water, and it occurs most plentifully in the seas of warm regions.

Model no. 66. *Clavulina Parisiensis**, D'Orb. Page 268, no. 3.

Hab. Fossil near Paris. Pl. I. fig. 26.

Type, *Valvulina triangularis*. This form is directly intermediate between the type (Model no. 25) and the narrow, pointed condition shown in Model no. 2 (*V. Clavulus*). See Carpenter's 'Introd.' pl. 11. figs. 17, 18, and D'Orbigny's "Cuba" (*Valvulina tricarinata*), pl. 2. figs. 16-18. The Model appears to have been taken from a specimen which has accidentally lost its valve.

Model no. 67. *Uvigerina pygmaea**, D'Orb. Page 269, no. 2,
pl. 12. figs. 8, 9.

Hab. Fossil near Sienna. Pl. II. fig. 54.

A typical form.

Model no. 68. *Bulimina caudigera*, D'Orb. Page 270, no. 16.

Hab. Adriatic, near Rimini. Pl. II. fig. 65.

An acute-ovate *Bulimina*, with closely investing elongate segments, the later ones reaching back to the apex formed by the first.

Model no. 69. *Rosalina globularis**, D'Orb. Page 271, no. 1, pl. 13. figs. 1-4.

Hab. Shores of the Atlantic, growing attached to sea-weeds and corals. Pl. II. fig. 69.

This is *Discorbina globularis*, a good subspecies. Egger (For. Miocän-Sch. pl. 4. figs. 1-3) describes and figures it under the name of *Rotalina semiporata*. A somewhat similar variety is given by D'Orbigny (Fos. For. Vien. pl. 11. figs. 4-6) as *Rosalina obtusa*, fine specimens of which, with lineato-granulated surface, are common off Greenland. *D. globularis* is common everywhere, from the shore down to 50 fathoms.

Model no. 70. *Rotalia armata*, D'Orb. Page 273, no. 22.

Hab. Cayenne, Martinique; fossil at Chavagnes (Maine-et-Loire), near Nantes, and near Bordeaux. Pl. III. fig. 88.

The short-spined variety of *Calcarina Spengleri*.

Model no. 71. *Rotalia pulchella*, D'Orb. Page 274, no. 32.

(No locality given.) Pl. III. fig. 80.

This belongs to the genus *Pulvinulina*, of which it is a somewhat flat-faced variety. It is the *Cidarollus plicatus* of Montfort. The same variety is given in D'Orbigny's "Cuba" (pl. 5. figs. 1, 2, 3) as *Rotalina Caribæa*.

Model no. 72. *Rotalia (Discorbis) Gervillii**, D'Orb.
Page 274, no. 36.

Hab. Fossil at Valognes. Pl. II. fig. 72.

This is the *Discorbites (Discorbis) vesicularis* of Lamarck—a good varietal form of *Discorbina Turbo*, D'Orb., sp.

Model no. 73. *Rotalia (Trochulina) Turbo**, D'Orb.
Page 274, no. 39.

Hab. Fossil near Paris. Pl. II. fig. 68.

This is *Discorbina Turbo*; a type-form, having its fullest development in *D. trochidiformis*, Lamarck, sp.

Model no. 74. *Rotalia (Turbinulina) Beccarii**, Linn.
Page 275, no. 42.

Hab. The European shores of the Atlantic; Island of Martinique. Pl. III. fig. 83.

Specimens of this somewhat variable species have received

several different names in the course of the 'Tableau des Céphalopodes.' Thus the Model now under consideration (74) is the ordinary European form; *Rotalina Corallinarum* (Model no. 75) is the more fully developed West-Indian variety, which is a still better type; and *R. tortuosa*† (page 275, no. 40) is the form common in the Adriatic. *Rosalina Parkinsoniana* (For. Cuba, p. 99, pl. 4. figs. 25-27) is another name given to an Atlantic variety.

Model no. 75. *Rotalia (Turbinulina) Corallinarum*, D'Orb.
Page 275, no. 48.

Hab. The Atlantic, at Noirmoutier. Pl. III. fig. 84.
Rotalia Beccarii, best type.

LIVRAISON 4^{me}.

Model no. 76. *Globigerina bulloides*, D'Orb. (adult).
Page 277, no. 1.

Hab. Adriatic, near Rimini. Pl. II. fig. 55.
The common, wide-spread, and essentially deep-sea *Globigerina*.

Model no. 77. *Truncatulina refulgens**, Montfort, sp.
Page 279, no. 5, pl. 13. figs. 8-11.

Hab. Adriatic, near Rimini; Mediterranean, off Corsica; South Sea at Rawack, Isle of Madagascar, Cape of Good Hope. Pl. II. fig. 76.

This belongs to the type, *Planorbulina farcta*, F. & M., sp.

Model no. 78. *Planorbulina nitida**, D'Orb. Page 280, no. 1.

Hab. Atlantic, coast of Bellisle. Pl. II. fig. 75.

A convenient subspecies, intermediate between *P. Mediterraneensis*, D'Orb., and *P. (Truncatulina) lobatula*, W. & J., sp. Type, *Planorbulina farcta*, F. & M., sp.

Model no. 79. *Planorbulina Mediterraneensis**, D'Orb.
Page 280, no. 2, pl. 14. figs. 4-6 bis.

Hab. Mediterranean, attached to various bodies. Pl. II. fig. 74.

D'Orbigny subsequently altered the name of this form (For. Cuba, p. 85, pl. 6. f. 11-13) to *Planorbulina vulgaris*, because he found that the species was not peculiar to the Mediterranean. Such a change seems contrary to rule; so we adhere to the original trivial name.

† Termed *Rosalina Beccarii* by D'Orbigny in his 'For. Cuba,' p. 100.

Model no. 80. *Operculina complanata**, DeFrance.

Page 281, no. 1, pl. 14. figs. 7-10.

Hab. Fossil, Bordeaux. Pl. III. fig. 93.

Subtype of *Nummulina*.

Model no. 81. *Vertebralina striata**, D'Orb. Page 283, no. 1.

Hab. Mediterranean; Red Sea; South Sea, near Rawack. Pl. I. fig. 1.

The robust, compressed, typical form. See also note on Model no. 22.

Model no. 82. *Robulina cultrata**, Montfort. Page 287, no. 1.

Hab. Adriatic; and fossil near Vienna. Pl. I. fig. 39.

There seems no necessity for *Robulina* as a generic term; and it would be impossible to carry out even the conventional distinction, depending upon the degree of curvature and minute differences in the position of the terminal orifice, laid down by D'Orbigny in separating it from *Cristellaria*. *Cristellaria cultrata* is a good subspecific name for those carinate varieties of the subtype, *Cristellaria Calcar*, Linn., which are without spinous processes.

Model no. 83. *Cristellaria Cassis**, F. & M. Page 290, no. 3.

Hab. Adriatic, near Rimini; fossil near Sienna. Pl. I. fig. 44.

The adult shell. The young form is given in Model no. 44.

Model no. 84. *Cristellaria costata*, D'Orb. Page 292, no. 10.

Hab. Adriatic, near Rimini. Pl. I. fig. 46.

A thin, elongated, carinate *Cristellaria*, with parallel costæ over the body of the shell.

Model no. 85. *Cristellaria (Saracenaria) Italica**, DeFr.

Page 293, no. 26.

Hab. Adriatic, near Rimini; and fossil near Sienna. Pl. I. fig. 41.

A trihedral keelless variety of *Cristellaria Calcar*. Model no. 19 shows the young condition of the same variety.

Model no. 86. *Nonionina umbilicata**, D'Orb. Page 293, no. 5, pl. 15. figs. 10-12.

Hab. Adriatic, near Rimini; Mediterranean; and fossil near Bordeaux and Sienna. Pl. III. fig. 98.

A variety of *Nonionina asterizans*, F. & M., sp., scarcely distinguishable from *N. pompilioides* of the same authors.

Model no. 87. *Nummulina planulata*, Lamk.* (young).

Page 296, no. 4.

(No locality). Pl. III. fig. 95.

The Model has been constructed from a somewhat convex individual, and the aperture is wrongly placed.

Model no. 88. *Nummulina (Assilina) discoïdalis*, D'Orb.

Page 296, no. 1.

Hab. South Sea, at Rawack. Pl. III. fig. 94.

This is an *Operculina*, one of the thick subvarieties of *O. complanata*, Def. The term *Assilina* has been applied to those flat *Nummulinæ* which, having no alar flaps to their segments, do not cover up their umbones, but leave the whorls apparent, with or without an increased growth of the edges of the septa.

Model no. 89. *Siderolina lævigata*, D'Orb. Page 297, no. 2.

Hab. Fossil, St. Pierre at Maestricht. Pl. III. fig. 90.

A variety of *Calcarina Spengleri*, Gmel., sp.; a smooth, quadrangular (or rather bluntly 4-spined), biconvex form, having all traces of the chambers concealed by the excessive deposit of shell-substance.

Model no. 90. *Biloculina bulloides**, D'Orb. Page 297, no. 1,
pl. 16. figs. 1-4.

Hab. Adriatic, near Rimini; fossil near Paris and near Bordeaux. Pl. I. fig. 3.

This varies but little in its outline from *Biloculina ringens*, Lamk., sp., and *B. levis*, Defr., sp.

Model no. 91. *Biloculina depressa*, D'Orb. Page 298, no. 7.

Hab. Adriatic, near Rimini; fossil at Castel-Arquato. Pl. I. fig. 4.

The flattened carinate subvariety of *B. ringens*.

Model no. 92. *Spiroloculina depressa**, D'Orb. Page 298, no. 1.

Hab. Mediterranean; and fossil at Castel-Arquato. Pl. I. fig. 6.

In the 'Annales des Sciences Naturelles' this Model is referred to as *Spiroloculina perforata*—evidently one of the very numerous misprints which occur in D'Orbigny's Memoir. We take the name given with the Model as the one probably intended. The form represented is *Spiroloculina planulata*, Lamk., sp.

Model no. 93. *Triloculina trigonula**, Lamk. Page 293, no. 1.

Hab. Fossil near Paris, Soissons, and Valognes. Pl. I. fig. 7.

A good subtype.

Model no. 94. *Triloculina tricarinata*, D'Orb. Page 299, no. 7.

Hab. Red Sea. Pl. I. fig. 8.

This form is closely allied to *T. trigonula*, of which it may be considered a variety. The outer margins of the chambers, instead of being rounded, as in *T. trigonula*, are produced, and form a sharp keel-like armature to the three angles of the shell.

Model no. 95. *Triloculina oblonga**, Montagu. Page 300, no. 16.

Hab. Adriatic; Mediterranean; Atlantic, on the French and English coasts; the Antilles; fossil near Bordeaux, Soissons, Dax, and Castel-Arquato. Pl. I. fig. 9.

The elongated, compressed form of the same subtype, passing in many instances into weak forms of *Quinqueloculina Seminulum*, Linn., sp.

Model no. 96. *Quinqueloculina secans*, D'Orb. Page 303, no. 43.

Hab. Adriatic and Mediterranean. Pl. I. fig. 10.

This is the large outspread form of *Quinqueloculina Seminulum*, Linn., sp., common in all our littoral sands, and having sharp edges and obscure irregular transverse markings, never amounting to costæ.

Model no. 97. *Adelosina striata*, D'Orb. Page 304, no. 2.

Hab. Fossil at Castel-Arquato. Pl. I. fig. 15.

The immature form of *Quinqueloculina Brongniartii*, D'Orb. See note to Model no. 18, which represents the still younger condition of the shell.

Model no. 98. *Amphistegina Lessoni**, D'Orb. Page 304, no. 3, pl. 17. figs. 1-4.

Hab. Isle of France. Pl. III. fig. 92.

A thick variety of *Amphistegina vulgaris*, D'Orb. See Model no. 40.

Model no. 99. *Heterostegina depressa*, D'Orb.† Page 305, no. 2, pl. 17. figs. 5-7.

Hab. Island of St. Helena. Pl. III. fig. 100.

A high-class Foraminifer of the Nummuline group, but having its proper chambers subdivided by secondary septula into numerous chamberlets. See Carpenter's 'Introd. Foram.' p. 288, pl. 19. fig. 1. *Heterostegina* is plentiful in some parts of the tropical and subtropical seas, and occurs fossil in the Middle Tertiary Limestones of Malta, Vienna, and the West Indies, and in Arabia.

† Inadvertently omitted to be noticed in our former paper on D'Orbigny's species, Ann. Nat. Hist. ser. 3. vol. xii. p. 439.

Model no. 100. *Fabularia Discolithes**, Defr. Page 307, no. 1, pl. 17. figs. 14-17.

Hab. Fossil near Paris; a much depressed variety at Valognes. Pl. I. fig. 16.

Probably, as we have before stated, this specific name is a misprint for *Discolithus*. The name applied by Roissy, however, (*F. ovata*) takes precedence.

Catalogue of D'Orbigny's Models. 1826.

| Type. | Corrected name. | Pl. | Fig. | D'Orbigny's name. | Models. | | |
|------------------------------|------------------------------------|------------------------------------|------|---------------------------------|---------------------------------|------|-----|
| | | | | | Livr. | No. | |
| Vertebralina striata, D'O. | Vertebralina striata, D'O. | I. | 1. | Vertebralina striata ... | 4. | 81. | |
| | — conico-articulata, Batsch. | „ | 2. | Articulina nitida | 1. | 22. | |
| | Biloculina ringens, Lam. | „ | 3. | Biloculina bulloides ... | 4. | 90. | |
| | — depressa, D'O. | „ | 4. | — depressa..... | 4. | 91. | |
| | — aculeata, D'O. | „ | 5. | — aculeata | 2. | 31. | |
| | Spiroloculina planulata, Lam.. | „ | 6. | Spiroloculina depressa . | 4. | 92. | |
| | Triloculina trigonula, Lam. ... | „ | 7. | Triloculina trigonula... | 4. | 93. | |
| | — tricarinata, D'O. | „ | 8. | — tricarinata | 4. | 94. | |
| | — oblonga, Montagu..... | „ | 9. | — oblonga | 4. | 95. | |
| | Quinqueloculina secans, D'O. . | „ | 10. | Quinqueloculina secans | 4. | 96. | |
| | — Lyra, D'O..... | „ | 11. | — Lyra | 1. | 8. | |
| | — Ferussacii, D'O. | „ | 12. | — Ferussacii | 2. | 32. | |
| | — Saxorum, Lam. | „ | 13. | — Saxorum..... | 2. | 33. | |
| | Miliola Seminum, Linn. | — Brongniartii, D'O. (very young). | „ | 14. | Adelosina striata (young) | 1. | 18. |
| — Brongniartii, D'O. (young) | | „ | 15. | — striata (adult) ... | 4. | 97. | |
| (Type)..... | | „ | 16. | Fabularia Discolithes... | 4. | 100. | |
| Peneroplis pertusus, Forsk. | | Peneroplis pertusus, Forsk. ... | „ | 17. | Peneroplis planatus ... | 1. | 16. |
| | | — arietinus, Batsch. | „ | 18. | —, var. | 2. | 48. |
| (Type)..... | | Spirolina Lituus, Gmelin..... | „ | 19. | Spirolina cylindracea... | 1. | 24. |
| | | Dendritina Arbuscula, D'O. | „ | 20. | Dendritina Arbuscula .. | 1. | 21. |
| Orbiculina?..... | | Orbiculina adunca, F. & M. | „ | 21. | Orbiculina numismalis. | 1. | 20. |
| | | Pavonia flabelliformis, D'O. | „ | 22. | Pavonia flabelliformis... | 3. | 56. |
| (Type)..... | | Alveolina sabulosa, Montf. | „ | 23. | Alveolina Boscii..... | 2. | 50. |
| | | Valvulina triangularis, D'O. | „ | 24. | Valvulina triangularis . | 1. | 25. |
| Valvulina triangularis, D'O. | | — Clavulus, Lam. | „ | 25. | Nodosaria Clavulus ... | 1. | 2. |
| | | — Parisiensis, D'O..... | „ | 26. | Clavulina Parisiensis... | 3. | 66. |
| (Type)..... | | Nodosaria Radicula, Linn. ... | „ | 27. | Nodosaria Radicula | 1. | 1. |
| | Lingulina carinata, D'O. | „ | 28. | Lingulina carinata | 2. | 26. | |
| (Type)..... | — Hasta, D'O. | „ | 29. | Nodosaria Hasta..... | 3. | 52. | |
| | Glandulina Glans, D'O. | „ | 30. | — Glans | 3. | 51. | |
| (Type)..... | Frondicularia rhomboidalis, [D'O.] | „ | 31. | Frondicularia rhomboidalis..... | 1. | 3. | |
| | Dentalina obliqua, D'O. | „ | 32. | Nodosaria obliqua | 1. | 5. | |
| (Type)..... | Vaginulina elegans, D'O. | „ | 33. | Vaginulina elegans..... | 3. | 54. | |
| | — tricarinata, D'O. | „ | 34. | — tricarinata | 1. | 4. | |
| Nodosarina Raphanus, Linn. | Marginulina Raphanus, Linn. . | „ | 35. | Marginulina Raphanus | 1. | 6. | |
| | — glabra, D'O. | „ | 36. | — glabra..... | 3. | 55. | |
| (Type)..... | Rimulina glabra, D'O. | „ | 37. | Rimulina glabra..... | 3. | 53. | |
| | Planularia Cymba, D'O. | „ | 38. | Planularia Cymba | 2. | 27. | |
| (Type)..... | Cristellaria cultrata, Montf. ... | „ | 39. | Robulina cultrata | 4. | 82. | |
| | — virgata, D'O. | „ | 40. | — virgata | 1. | 14. | |
| (Type)..... | — Italica, Defr. | „ | 41. | Cristellaria Italica | 4. | 85. | |
| | — (young)..... | „ | 42. | — (young) ... | 1. | 19. | |
| (Type)..... | — lævigata, D'O. | „ | 43. | — lævigata | 2. | 47. | |
| | — Cassis, F. & M. | „ | 44. | — Cassis (adult) ... | 4. | 83. | |
| (Type)..... | — (young)..... | „ | 45. | — (young)..... | 2. | 44. | |
| | — costata, D'O. | „ | 46. | — costata | 4. | 84. | |

| Type. | Corrected name. | Pl. | Fig. | D'Orbigny's name. | Models. | |
|--------------------------------------------|----------------------------------------------------------------------|------|------|------------------------|---------|-----|
| | | | | | Livr. | No. |
| Polymorphina lactea, <i>W. & J.</i> | Polymorphina lactea, <i>W. & J.</i> | II. | 47. | Polymorphina communis | 3. | 62. |
| | — Burdigalensis, <i>D'O.</i> | „ | 48. | — Burdigalensis | 3. | 29. |
| | — Thouini, <i>D'O.</i> | „ | 49. | — Thouini | 2. | 23. |
| | — Problema, <i>D'O.</i> | „ | 50. | — Problema | 3. | 61. |
| | — Gutta, <i>D'O.</i> | „ | 51. | — Gutta | 2. | 30. |
| | — gibba, <i>D'O.</i> | „ | 52. | — gibba | 3. | 63. |
| (Type)..... | Dimorphina tuberosa, <i>D'O.</i> | „ | 53. | Dimorphina tuberosa | 3. | 60. |
| (Type)..... | Uvigerina pygmæa, <i>D'O.</i> | „ | 54. | Uvigerina pygmæa | 3. | 67. |
| (Type)..... | Globigerina bulloides, <i>D'O.</i> | „ | 55. | Globigerina bulloides | 4. | 76. |
| (Type)..... | — (young) | „ | 56. | — (young) | 1. | 17. |
| (Type)..... | Pullenia sphaeroides, <i>D'O.</i> | „ | 57. | Nonionina sphaeroides | 2. | 43. |
| (Type)..... | Sphaeroidina bulloides, <i>D'O.</i> | „ | 58. | Sphaeroidina bulloides | 3. | 65. |
| Textularia agglutinans, <i>D'O.</i> | Textularia pygmæa, <i>D'O.</i> | „ | 59. | Textularia pygmæa | 1. | 7. |
| | — gibbosa, <i>D'O.</i> | „ | 60. | — gibbosa | 2. | 28. |
| | Bigenerina digitata, <i>D'O.</i> | „ | 61. | Bigenerina digitata | 3. | 58. |
| | — Nodosaria, <i>D'O.</i> | „ | 62. | — Nodosaria | 3. | 57. |
| Bulimina Preslii, <i>Rss.</i> | Grammostomum Pennatula, <i>D'O.</i> | „ | 63. | Vulvulina Capreolus | 3. | 59. |
| | Bulimina elegans, <i>D'O.</i> [<i>Bat.</i> caudigera, <i>D'O.</i>] | „ | 64. | Bulimina elegans | 1. | 9. |
| (Type)..... | Virgulina squamosa, <i>D'O.</i> | „ | 65. | — caudigera | 3. | 68. |
| Discorbina trochidiformis, <i>Lamk.</i> | Virgulina squamosa, <i>D'O.</i> | „ | 66. | Virgulina squamosa | 3. | 64. |
| | Cassidulina lævigata, <i>D'O.</i> | „ | 67. | Cassidulina lævigata | 2. | 41. |
| | Discorbina Turbo, <i>D'O.</i> | „ | 68. | Rotalia Turbo | 3. | 73. |
| | — globularis, <i>D'O.</i> | „ | 69. | — globularis | 3. | 69. |
| | — Parisiensis, <i>D'O.</i> | „ | 70. | Rosalina Parisiensis | 2. | 38. |
| | — rosacea, <i>D'O.</i> | „ | 71. | — rosacea | 2. | 39. |
| | — vesicularis, <i>Lam.</i> | „ | 72. | Rotalia Gervillii | 3. | 72. |
| Planorbulina Mediterraneensis, <i>D'O.</i> | — elegans, <i>D'O.</i> | „ | 73. | Anomalina elegans | 2. | 42. |
| | Planorbulina Mediterraneensis, [<i>D'O.</i> ranensis] | „ | 74. | Planorbulina Mediter- | 4. | 79. |
| | — nitida, <i>D'O.</i> | „ | 75. | — nitida | 4. | 78. |
| | Truncatulina refulgens, <i>Montf.</i> | „ | 76. | Truncatulina refulgens | 4. | 77. |
| Planorbulina Ariminensis, <i>D'O.</i> | — lobatula, <i>W. & J.</i> | „ | 77. | — tuberculata | 2. | 37. |
| | — rosea, <i>D'O.</i> | III. | 78. | Planulina Ariminensis | 2. | 49. |
| | — pulchella, <i>D'O.</i> | „ | 79. | Rotalia rosea | 2. | 35. |
| Pulvinulina repanda, <i>F. & M.</i> | Pulvinulina pulchella, <i>D'O.</i> | „ | 80. | — pulchella | 3. | 71. |
| | — Menardii, <i>D'O.</i> | „ | 81. | — Menardii | 1. | 10. |
| | — punctulata, <i>D'O.</i> | „ | 82. | — punctulata | 1. | 12. |
| Rotalia Beccarii, <i>Linn.</i> | Rotalia Beccarii, <i>Linn.</i> (Euro-pean form). | „ | 83. | — Beccarii | 3. | 74. |
| | — Beccarii, <i>Linn.</i> (West-Indian form). | „ | 84. | — Corallinarum | 3. | 75. |
| | — orbicularis, <i>D'O.</i> | „ | 85. | Gyroidina orbicularis | 1. | 13. |
| Calcarina Spengleri, <i>Linn.</i> | — Soldanii, <i>D'O.</i> | „ | 86. | — Soldanii | 2. | 36. |
| | Calcarina Spengleri, <i>Linn.</i> | „ | 87. | Calcarina Calcar | 2. | 34. |
| | — armata, <i>D'O.</i> | „ | 88. | Rotalia armata | 3. | 70. |
| | — bisaculeata, <i>D'O.</i> | „ | 89. | — bisaculeata | 1. | 15. |
| Amphistegina vulgaris, <i>D'O.</i> | — lævigata, <i>D'O.</i> | „ | 90. | Siderolina lævigata | 4. | 89. |
| | — Lessonii, <i>D'O.</i> | „ | 91. | Amphistegina vulgaris | 2. | 40. |
| Nummulina perforata, <i>Montfort.</i> | — Lessonii, <i>D'O.</i> | „ | 92. | — Lessonii | 4. | 98. |
| | Operculina complanata, <i>Def.</i> | „ | 93. | Operculina complanata | 4. | 80. |
| Polystomella crispa, <i>Linn.</i> | — discoidalis, <i>D'O.</i> | „ | 94. | — discoidalis | 4. | 88. |
| | Nummulina planulata, <i>Lam.</i> | „ | 95. | Nummulina planulata | 4. | 87. |
| | Polystomella crispa, <i>Linn.</i> | „ | 96. | Polystomella crispa | 2. | 45. |
| | — Nonionina incrassata, <i>F. & M.</i> | „ | 97. | Nonionina levis | 2. | 46. |
| (Type)..... | — pompilioides, <i>F. & M.</i> | „ | 98. | — umbilicata | 4. | 86. |
| | — Limba, <i>D'O.</i> | „ | 99. | — Limba | 1. | 11. |
| | Heterostegina depressa, <i>D'O.</i> | „ | 100. | Heterostegina depressa | 4. | 99. |

APPENDIX.

Reuss and Fritsch's Models of Foraminifera. 1861.

Whilst speaking of Models of Foraminifera, it may not be amiss to notice a more recent series than that of D'Orbigny—namely, a set of one hundred plaster Models prepared at Prague, under the direction of Professor Reuss and Dr. Anton Fritsch*. These Models are 5 centim. in length, and are furnished with printed labels. The species have been selected with a view of supplying a perfect series, and at the same time completing D'Orbigny's suite of Models. Although the aim of the authors of this set of Models is to give delineations of a more extended series of types than were known to D'Orbigny, and though the workmanship expended upon them has the advantage in point of skill, it may be doubted whether the species chosen for illustration are altogether so apt, or the general result so instructive, as in the earlier series. Of the forms thus illustrated, some have been selected from species already known, and many have been described and figured in one or other of Professor Reuss's numerous papers on Fossil Foraminifera. The needless multiplication of genera appears in a striking light in reviewing the nomenclature of this catalogue. We propose, however, merely to give the list of these Models as arranged in the "Catalogue," with the *Number* and *Locality* appended to each; also a few remarks, when specially called for, and the *type* to which the form belongs. We leave the order and the classification as we find them, thinking that it may be of interest to some to compare the results with the somewhat similar, but less artificial, system which we are in the habit of using, based upon the principles laid down in Dr. Carpenter's "Introduction."

We have to thank Mr. S. V. Wood, F.G.S., for lending us his set of D'Orbigny's Models during several years, whilst we have been engaged on this Memoir.

* "Verzeichniss von 100 Gypsmodellen von Foraminiferen, welche unter der Leitung des Prof. A. Reuss und Dr. Anton Fritsch gearbeitet wurden. Ausgegeben von W. Frič, Naturalienhändler in Prag, Wassergasse Nro. 736-II.

"Die Auswahl der Species ist so getroffen, dass die gegenwärtige Sammlung ein vollständiges Ganze bildet, und dabei die D'Orbigni'sche Suite kompletirt. Die Exemplare sind 5 Centimètre gross und mit gedruckten Etiquetten versehen.

"Der Preis (sammt Emballage) 36 fl. ö. W. oder 24 Th. P. C."

MM. Reuss and Fritsch have liberally given us a set of these useful Models.

Catalogue of the Models of Foraminifera prepared by Professor
Dr. A. E. Reuss and Dr. Anton Fritsch. 1861.

[Prof. Reuss's Classification is here followed.]

I. FORAMINIFERA WITH NON-POROUS SHELLS.

A. WITH SANDY SILICEOUS SHELLS.

I. *Lituolidea* (Reuss).

| No. | Name. | Type. | Locality. |
|-----|----------------------------------------------------------------------------------|-----------------------------------------|------------------|
| 1. | <i>Placopsilina irregularis</i> , D'O. (<i>Lituola Cenomana</i> , D'O.) | } <i>Lituola nautiloidea</i> , Lam. ... | Upper Chalk. |
| 2. | <i>Haplostiche fœdissima</i> , Rss. (<i>L. Scorpionus</i> , Montf.) | | Upper Greensand. |
| 3. | <i>Haplophragmium inflatum</i> (<i>L. nautiloidea</i> , Lam.) | | Upper Greensand. |
| 4. | — <i>irregularis</i> , Roem., sp. (<i>L. irregularis</i> , Roem.) | | Chalk. |

II. *Uvellidea* (Reuss).

| | | | |
|-------|----------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------------------|
| 5. | <i>Valvulina triangularis</i> , D'O. | <i>Valvulina triangularis</i> , D'O. | Eocene. |
| 6. | <i>Verneuilina spinulosa</i> , Rss. | } <i>Textularia agglutinans</i> , D'O. { | Miocene. |
| 7. | <i>Tritaxia tricarinata</i> , D'O., sp. ... (<i>Verneuilina tricarinata</i> ; old) | | Cretaceous. |
| 8, 9. | <i>Ataxophragmium variabile</i> , D'O., sp. (α & β) | <i>Bulimina Preslii</i> , Rss. | Chalk. |
| 10. | <i>Clavulina communis</i> , D'O. | } <i>Textularia agglutinans</i> , D'O. { | Tertiary. |
| 11. | <i>Gaudryina pupoides</i> , D'O. | | Upper and Middle |
| 12. | <i>Bigenerina Nodosaria</i> , D'O. | | Recent. [Chalk.] |
| 13. | <i>Conulina conica</i> , D'O. | | ? <i>Lituola nautiloidea</i> , Lam. ... |
| 14. | <i>Chrysalidina gradata</i> , D'O. | ? <i>Chrysalidina gradata</i> , D'O. | Cretaceous. |

B. WITH COMPACT, PORCELLANOUS, CALCAREOUS SHELLS.

I. *Squamulinidea* (Reuss).

II. *Miliolidea* (Reuss).

| | | | |
|-----|------------------------------------------------------------------------------------------|-----------------------------------------|-----------|
| 15. | <i>Cornuspira involvens</i> , Rss. | <i>Cornuspira foliacea</i> , Phil. | Miocene. |
| 16. | <i>Uniloculina Indica</i> , D'O. (? Young of a striped <i>Quinqueloculina</i> .) | } <i>Miliola Seminulum</i> , Linn. | Recent. |
| 17. | <i>Biloculina Lunula</i> , D'O. (<i>B. depressa</i> , D'O.) | | Tertiary. |
| 18. | <i>Spiroloculina dilatata</i> , D'O. (<i>Sp. planulata</i> , Lam.) | | Miocene. |
| 19. | <i>Triloculina gibba</i> , D'O. (<i>T. trigonula</i> , Lam.) | | Tertiary. |
| 20. | <i>Quinqueloculina</i> , sp., D'O. | } <i>Fabularia ovata</i> , Roissy | Tertiary. |
| 21. | <i>Fabularia discolithes</i> , Defr. | | Eocene. |

| No. | Name. | Type. | Locality. |
|----------------------------------------------------------|----------------------------------------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| III. Peneroplidea (Reuss). | | | |
| 22. | <i>Peneroplis pulchellus</i> , <i>D'O.</i> | } <i>Peneroplis pertusus</i> , <i>Forsk.</i> | { Recent. Recent. Recent. Middle Tertiary. Recent. |
| 23. | — <i>planatus</i> , <i>Montf.</i> | | |
| 24. | <i>Dendritina arbuscula</i> , <i>D'O.</i> | | |
| 25. | <i>Spirolina Austriaca</i> , <i>D'O.</i> | | |
| 26. | <i>Vertebralina mucronata</i> , <i>D'O.</i> | | |
| 27. | <i>Hauerina compressa</i> , <i>D'O.</i> | <i>Miliola Seminulum</i> , <i>Linn.</i> | Miocene. |
| 28. | <i>Pavonina flabelloides</i> , <i>D'O.</i> | ? <i>Orbiculina adunca</i> , <i>F. & M.</i> | Recent. |
| IV. Orbitolitidea (Reuss). | | | |
| 29. | <i>Cyclolina cretacea</i> , <i>D'O.</i> | <i>Patellina concava</i> , <i>Lam.</i> | Chalk-marl. |
| 30. | <i>Orbitolites macropora</i> , <i>Lam.</i> | <i>Orbitolites complanata</i> , <i>Lam.</i> | Mästricht Chalk. |
| II. FORAMINIFERA WITH POROUS SHELLS. | | | |
| A. WITH HYALINE, FINELY POROUS CALCAREOUS SHELLS. | | | |
| I. Spirillidea (Reuss). | | | |
| 31. | <i>Spirillina punctata</i> , <i>D'O.</i> | ? | [Tertiary and recent. |
| II. Ovulitidea (Reuss). | | | |
| 32. | <i>Ovulites margaritacea</i> , <i>Lam.</i> | <i>Ovulites margaritacea</i> , <i>Lam.</i> | [Eocene. |
| III. Rhabdoidea (Reuss). | | | |
| 33. | <i>Lagena simplex</i> , <i>Rss.</i> | } <i>Lagena sulcata</i> , <i>W. & J.</i> | { Upper Chalk. Recent. |
| 34. | — <i>vulgaris</i> , <i>Will.</i> | | |
| | (<i>L. levis</i> , <i>Montagu.</i>) | | |
| 35. | <i>Fissurina carinata</i> , <i>Rss.</i> | } <i>Nodosarina Raphanus</i> , <i>Linn.</i> | { Tertiary. Gault. Upper Chalk. Upper Greensand. |
| | (<i>L. marginata</i> , <i>Montagu.</i>) | | |
| 36. | <i>Nodosaria tetragona</i> , <i>Rss.</i> | | |
| 37. | — <i>inflata</i> , <i>Rss.</i> | | |
| | (<i>A short N. Raphanistrum.</i>) | | |
| 38. | — <i>lepida</i> , <i>Rss.</i> | } <i>Orthocerina Murchisoni</i> , <i>Rss.</i> | { Recent. Upper Chalk. |
| | (<i>A long N. Radicula.</i>) | | |
| 39. | <i>Orthocerina quadrilatera</i> , <i>D'O.</i> | | |
| 40. | <i>Dentalina acuminata</i> , <i>Rss.</i> | } <i>Nodosarina Raphanus</i> , <i>Linn.</i> | { Upper Chalk. Upper Chalk. Upper Tertiaries. Gault. Lower Greensand. Recent. Upper Greensand. Upper Greensand. |
| 41. | — <i>Lorneiana</i> , <i>D'O.</i> | | |
| 42. | <i>Vaginulina Badensis</i> , <i>D'O.</i> | | |
| 43. | — <i>transversalis</i> , <i>Rss.</i> | | |
| 44. | — <i>crstellarioides</i> , <i>Rss.</i> | | |
| 45. | <i>Rimulina glabra</i> , <i>D'O.</i> | | |
| 46. | <i>Fronicularia Lanceola</i> , <i>Rss.</i> .. | | |
| 47. | — <i>Goldfussii</i> , <i>Rss.</i> | | |
| | (<i>Fr. complanata</i> , <i>Defr.</i>) | | |
| 48. | — <i>turgida</i> , <i>Rss.</i> | | |
| 49. | <i>Rhabdogonium acutangulum</i> , <i>Rss.</i> | | |
| 50. | — <i>Martensi</i> , <i>Rss.</i> | } <i>Nodosarina Raphanus</i> , <i>Linn.</i> | { Miocene. Lower Greensand. Tertiary. Upper Chalk. |
| 51. | <i>Amphimorphina Haueri</i> , <i>Neugel.</i> .. | | |
| 52. | <i>Dentalinopsis semitriquetra</i> , <i>Rss.</i> .. | | |
| | (<i>A triangular Dentalina.</i>) | | |
| 53. | <i>Flabellina oblonga</i> , <i>V. Münst.</i> ... | | |
| 54. | — <i>cordata</i> , <i>Rss.</i> | } <i>Nodosarina Raphanus</i> , <i>Linn.</i> | { Miocene. |
| | (<i>Fl. oblonga</i> , <i>V. M.</i>) | | |
| 55. | <i>Pseudium ellipticum</i> , <i>Rss.</i> | } <i>Bulimina Preslii</i> , <i>Rss.</i> | { Gault. |
| | (<i>A globose or Glanduline Marginulina.</i>) | | |
| 56. | <i>Lingulina costata</i> , <i>D'O.</i> | | |
| 57. | <i>Lingulinopsis Bohemica</i> , <i>Rss.</i> ... | } <i>Bulimina Preslii</i> , <i>Rss.</i> | { Miocene. Chalk-marl. |
| | (<i>A Linguline Marginulina.</i>) | | |
| 58. | <i>Pleurostomella fusiformis</i> , <i>Rss.</i> (An extreme form of <i>Virgulina.</i>) | | |

| No. | Name. | Type. | Locality. |
|------------------------------------------------------------|------------------------------------------------------|----------------------------------------------------|------------------------------------------------------------------------------|
| IV. Cristellaridea (Reuss). | | | |
| 59. | <i>Marginulina Ensis</i> , <i>D'O.</i> | Nodosarina Raphanus, <i>Linn.</i> | Upper Chalk. Upper Chalk. Middle Tertiary. Cretaceous. Tertiary. |
| 60. | — <i>bullata</i> , <i>Roem.</i> | | |
| 61. | <i>Cristellaria Josephina</i> , <i>D'O.</i> | | |
| 62. | — <i>rotulata</i> , <i>Lam.</i> | | |
| 63. | <i>Robulina deformis</i> , <i>Rss.</i> | | |
| | (First stage of <i>C. rotulata</i> .) | | |
| V. Polymorphinidea (Reuss). | | | |
| 64. | <i>Bulimina pupoides</i> , <i>D'O. (β.)</i> ... | Bulimina Preslii, <i>Rss.</i> | Tertiary and recent. Tertiary. |
| 65. | <i>Virgulina pertusa</i> , <i>Rss.</i> | | |
| | (<i>V. squamosa</i> , <i>D'O.</i>) | | |
| 66. | <i>Uvigerina pygmæa</i> , <i>D'O.</i> | <i>Uvigerina pygmæa</i> , <i>D'O.</i> | Tertiary. |
| 67. | <i>Polymorphina complanata</i> , <i>D'O.</i> | <i>Polymorphina lactea</i> , <i>W. & J.</i> | Miocene. |
| 68. | <i>Pyrulina Gutta</i> , <i>D'O.</i> | | Tertiary. |
| 69. | <i>Globulina æqualis</i> , <i>D'O.</i> | | Upper Tertiary. |
| 70. | <i>Guttulina Austriaca</i> , <i>D'O.</i> | | Tertiary. |
| 71. | <i>Sphæroidina Austriaca</i> , <i>D'O.</i> | | <i>Sphæroidina bulloides</i> , <i>D'O.</i> |
| | (<i>Sph. bulloides</i> , <i>D'O.</i>) | | |
| 72. | <i>Dimorphina obliqua</i> , <i>D'O.</i> | <i>Nodosarina Raphanus</i> , <i>Linn.</i> | Tertiary. |
| | (A Dentaline <i>Marginulina</i> .) | | |
| VI. Cryptostegia (Reuss). | | | |
| 73. | <i>Chilostomella ovoidea</i> , <i>Rss.</i> | ? <i>Miliola Seminulum</i> , <i>Linn.</i> | Tertiary. Upper Greensand. |
| 74. | <i>Allomorphina cretacea</i> , <i>Rss.</i> | | |
| | (A <i>Quinqueloculine Miliola?</i>) | | |
| VII. Textilaridea (Reuss). | | | |
| 75. | <i>Textularia Conulus</i> , <i>Rss.</i> | <i>Textularia agglutinans</i> , <i>D'O.</i> | Upper Chalk. Gault. |
| 76. | <i>Proropus complanatus</i> , <i>Rss.</i> ... | | |
| | (The first stage of <i>Bigenerina</i> .) | | |
| 77. | <i>Sagrana pulchella</i> , <i>D'O.</i> | <i>Bulimina Preslii</i> , <i>Rss.</i> | Recent. |
| 78. | <i>Vulvulina Gramen</i> , <i>D'O.</i> | | Recent. |
| 79. | <i>Bolivina Beyrichi</i> , <i>Rss.</i> | | Tertiary. |
| 80. | <i>Schizophora Neugeborni</i> , <i>Rss.</i> | | Miocene. |
| | (<i>Bigenerine Vulvulina Pennatula</i> .) | | |
| VIII. Cassidulinidea (Reuss). | | | |
| 81. | <i>Cassidulina crassa</i> , <i>D'O.</i> | <i>Cassidulina lavigata</i> , <i>D'O.</i> .. | Recent. Miocene. |
| 82. | <i>Ehrenbergina serrata</i> , <i>Rss.</i> | | |
| | (<i>Cassidulina serrata</i> , <i>Rss.</i>) | | |
| B. FORAMINIFERA WITH VERY POROUS CALCAREOUS SHELLS. | | | |
| I. Rotalidea (Reuss). | | | |
| 83. | <i>Rotalia Brongniarti</i> , <i>D'O.</i> | <i>Pulvinulina repanda</i> , <i>F. & M.</i> | Miocene. |
| | (<i>Pulvinulina auricula</i> , <i>F. & M.</i>) | | |
| 84. | — <i>Girardana</i> , <i>Rss.</i> | <i>Rotalia Beccarii</i> , <i>Linn.</i> | Tertiary. |
| | (<i>Rotalia Soldanii</i> , <i>D'O.</i>) | | |
| 85. | — <i>bulimoides</i> , <i>Rss.</i> | <i>Bulimina Preslii</i> , <i>Rss.</i> | Tertiary. |
| | (<i>Bulimina elegantissima</i> , <i>Will.</i>) | | |
| 86. | <i>Siphonina reticulata</i> , <i>Rss.</i> | <i>Planorbulina farcta</i> , <i>F. & M.</i> .. | Miocene. |
| | (<i>Planorbulina reticulata</i> , <i>Rss.</i>) | | |

| No. | Name. | Type. | Locality. |
|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------------|----------------------------------|
| 87. | <i>Asterigerina Planorbis</i> , <i>D'O.</i> (<i>Discorbina rosacea</i> , <i>D'O.</i>) | <i>Discorbina Turbo</i> , <i>D'O.</i> | Tertiary. |
| 88, 89. | <i>Siderolithes calcitrapoides</i> , <i>Lam.</i> | <i>Calcarina Spengleri</i> , <i>Gm.</i> | Chalk of Mästricht. |
| 90. | <i>Planorbulina Mediterranea</i> , <i>D'O.</i> | <i>Planorbulina farcta</i> , <i>F. & M.</i> .. | Recent. |
| 91. | <i>Globigerina bulloides</i> , <i>D'O.</i> | <i>Globigerina bulloides</i> , <i>D'O.</i> ... | Tertiary. |
| 92. | <i>Orbulina universa</i> , <i>D'O.</i> | <i>Orbulina universa</i> , <i>D'O.</i> | Tertiary and recent. |
| C. WITH CALCAREOUS SHELLS TRAVERSED BY AN INTERMEDIATE CANAL-SYSTEM. | | | |
| I. <i>Polystomellidea</i> (Reuss). | | | |
| 93. | <i>Polystomella aculeata</i> , <i>D'O.</i> | <i>Polystomella crispa</i> , <i>Linn.</i> | Tertiary and recent. |
| 94. | <i>Nonionina communis</i> , <i>D'O.</i> | <i>Nonionina asterizans</i> , <i>F. & M.</i> .. | Tertiary. |
| | (<i>N. Scapha</i> , <i>F. & M.</i>) | | |
| 95. | — <i>bulloides</i> , <i>D'O.</i> | <i>Pullenia sphaeroides</i> , <i>D'O.</i> | Tertiary and recent. [stone.] |
| | (<i>Pullenia sphaeroides</i> , <i>D'O.</i>) | | |
| 96. | <i>Fusulina cylindrica</i> , <i>Fisch.</i> | <i>Fusulina cylindrica</i> , <i>Fisch.</i> ... | Carboniferous Lime- |
| II. <i>Nummulitidea</i> (Reuss). | | | |
| 97. | <i>Amphistegina Quoyi</i> , <i>D'O.</i> | <i>Amphistegina vulgaris</i> , <i>D'O.</i> | Recent. |
| 98. | <i>Operculina</i> , sp. (after <i>Carpenter</i>)... | <i>Nummulina perforata</i> , <i>Montf.</i> .. | Recent. |
| 99. | <i>Heterostegina</i> , sp. (after <i>Carpenter</i>) } | <i>Heterostegina depressa</i> , <i>D'O.</i> { | Recent. |
| 100. | — <i>costata</i> , <i>D'O.</i> | | Miocene. |

V.—On *Ægeon* Alfordi, a new British Sea-Anemone.
By PHILIP HENRY GOSSE, F.R.S.

[Plate VII.]

Family Anthedæ.

Genus *ÆGEON*, mihi.

Base adherent to rocks with a moderate tenacity; broader than the medium diameter of the column.

Column irregularly distensible, not mucous, somewhat versatile, but generally forming a tall, erect, thick pillar, the summit expanding; the margin tentaculate; the surface longitudinally fluted (as if composed of a multitude of slender vertical cylinders placed in contact side by side), each cylinder studded with a single vertical row of minute warts. No suckers or loopholes. Substance pulpy, membranous.

Disk expanded, membranous, concave, revolute.

Tentacles numerous, in several rows, long, lax, irregularly flexuous, scarcely retractile.

Mouth not ordinarily set on a conc, but pouted after the reception of food; lip thin. Gonidial tubercles prominent.

Acontia wanting (?).